



NTSB 2017–2018 MOST WANTED LIST OF TRANSPORTATION SAFETY IMPROVEMENTS

Eliminate Distractions



RAIL

MWL
MOST WANTED LIST



What is the issue?

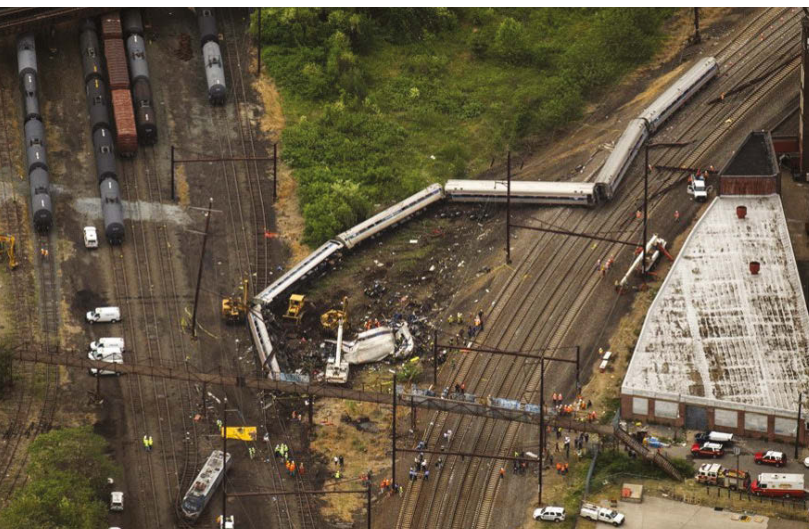
Although the most distraction-related fatalities occur on our highways, the detriments of visual, manual, cognitive, and auditory distractions can be seen in all modes of transportation. Catastrophes like the May 2015 Amtrak 188 accident occur when train operators don't keep their eyes and minds focused on their primary task. Communicating with crew and dispatchers, checking instruments and equipment, and handling scheduled procedures may be part of a train operator's work duties, but engaging in tasks that don't support operating can have deadly consequences. Additionally, increased use of portable electronic devices (PEDs) among transportation employees has made distractions more prevalent and resulted in a heightened safety risk during train operation.

We have investigated numerous railroad accidents in which operator distractions were a causal or contributing factor, and we've developed numerous safety recommendations to prevent human distraction in railroad operations. In addition to operator distraction due to PEDs, we are also concerned about the lack of distraction-avoidance training provided to railroad crews.

What can be done?

Every auxiliary task impairs our ability to process a primary task. For safety-critical operations, distraction must be managed—even engineered—to ensure safe operations. A cultural change is needed for drivers to understand that their safety depends on disconnecting from deadly distractions. In regulated transportation, the strict rules that minimize the threat of distraction must be embraced by every operator on every trip, and where we discover that distraction can be eliminated, reduced, or mitigated, regulators should act to do so.

The first step toward removing deadly distractions is to disconnect from non-mission-critical information. For decades, the aviation field has recognized the need for "sterile cockpit" procedures that restrict activities and conversations to the task at hand. But all modes of



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transportation need to rise to today's distraction challenges. That's why, in December 2012, we called for a driver ban of all PEDs.

We believe it is critical that the railroad industry, including freight, passenger, and transit systems, implement ways to detect PEDs and provide railroad crews distraction-avoidance training immediately. These interventions will help ensure the safety of crewmembers and the public, and these safety mitigations warrant action by railroad regulators. We believe that regulators are capable of developing comprehensive safety requirements involving PED detection, distraction-avoidance training, and safety oversight, to mitigate the risks of operator distractions.



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In our investigation of the May 12, 2015, Amtrak 188 passenger train derailment in Philadelphia, we determined that the train engineer lost attentional focus due to the emergent workload demands of a wayside emergency, entered a curve at high speed, and derailed the train, killing eight people and injuring nearly 200. This accident is just the latest example of the potential catastrophic consequences of human distraction. As a result of our investigation, we reiterated several previous recommendations issued to the Federal Railroad Administration regarding distraction, training, and the use of technology to help curb the dangers of operator distraction.

Public education continues to be important for reaching operators and safety-critical personnel about the dangers of distractions. However, we also need strong regulation and employer policies to help reduce accidents/crashes, injuries, and fatalities caused by the deadly distractions.

Likewise, we need to continue to build our technical understanding of distraction arising from auxiliary tasks in regulated transportation, especially as regards new vehicle technologies that require real-time operator attention. Advances in these areas will support regulatory efforts and lead us toward a cultural norm that encourages and supports operators remaining disconnected from deadly distractions. ■

The NTSB Most Wanted List highlights safety issues identified from the NTSB's accident investigations to increase awareness about the issues and promote recommended safety solutions.

The NTSB is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation – railroad, highway, marine and pipeline. The NTSB determines the probable cause of the accidents and issues safety recommendations aimed at preventing future accidents. In addition, the NTSB carries out special studies concerning transportation safety and coordinates the resources of the federal government and other organizations to provide assistance to victims and their family members impacted by major transportation disasters.

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Related Accidents*

Date	Location	Accident ID
September 12, 2008	Chatsworth, CA	DCA08MR009
May 12, 2015	Philadelphia, PA	DCA15MR010

*For detailed accident reports visit www.nts.gov

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**Critical changes
needed to reduce
transportation
accidents and
save lives.**

